ACCELERATED SITE TECHNOLOGY DEPOLOYMENT

Fact Sheet

Characterization/RIFS of the 221-U Facility at Hanford

Hanford Site

In Partnership with the Office of Science and Technology

Introduction

Under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) process, and with the support of their regulators and stakeholders, the Hanford site is evaluating the feasibility of managing its five former chemical processing facilities ("Canyons") in the 200 Area as an asset for onsite waste disposal instead of a mortgage for future demolition. Entombment of cleanup waste within the canyons, with use of clean fill as a barrier cap, is one of 5 options being considered in the remedial investigation/feasibility study (RI/FS) focused on formalizing the strategic decision for final disposition of the Canyon facilities. The 221-U Facility (U Plant) is being used as a pilot in the evaluation. In FY99 and FY00, EM-50 funding has been used to perform in-place characterization and remote sampling activities in the U Plant as prescribed by the high radiological conditions in the cells.

The $500 K funding request will be used to complete the characterization of liquid discovered in U Plant tanks. Due to the radiation levels, remote technologies involving a gamma camera, robots and manipulators must be used to perform the characterization tasks. The results of the characterization will be used to prepare a Final Feasibility Study (FFS), which will evaluate the Canyon Disposition Initiative (CDI) alternatives and result in a Proposed Plan, Performance Assessment, and CERCLA Record of Decision.

Description

Entombment of U Plant and other Hanford canyons will allow utilization of 81,000 m^3 of existing void space in the canyons for disposal of low-level or low-level mixed waste inside and outside the canyons. Waste generated at the Hanford site normally would be disposed in the onsite Environmental Restoration Disposal Facility (ERDF). Use of the Canyon facilities for waste disposal would extend the useful life of ERDF (saving up to 67,281 m3 of disposal space under Option 3) and defer the mortgage cost associated with decontamination and decommissioning (D&D) of the Canyon facilities. Facility surveillance and maintenance (S&M) as well as substantial out-year Canyon D&D and associated waste disposal costs would be avoided.

Benefits

- Offers substantial program cost savings by avoiding Canyon S&M, D&D, demolition, and waste disposal – up to $1 billion for all 5 canyons.
- Extends useful life of DOE's capital investment in the Canyon facilities.
- Conserves disposal space at ERDF for future cleanup wastes.
- Uses a D&D mortgage liability as an EM program asset to accelerate site cleanup missions and footprint reduction.
- Benefits and impacts multiple EM programs across EM-40 and EM-50.

Status

Approximately $200, 000 in funding from FY2000 has carried over into FY2001 for Phase III feasibility study and proposed plan for a record of decision. The CDI has recently been awarded $700K additional funding through the P2/ASTD program. The P2 funding will be used to complete the characterization of liquids discovered in U Plant tanks, and to support the development of CERCLA documentation.

Project Funding (in Thousands)

Funding Source	FY01
OST	$700

For more information on the Characterization/RIFS of the 221-U Facility at Hanford, contact:

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